



KARNATAKA STATE MINERALS LIMITED

(A Govt. of Karnataka Undertaking)

SCHEME OF MINING

(Permitted under Rule 12(2) of MMDR - 1988)

(Period :- 2016-17 to 2020-21)

THIMMAPPANAGUDI IRON ORE MINE

[Krishnanagar village, Sandur Taluk, Ballari District.]

[ML No. 2605, Extent:- 136.97Ha. (136.94 Ha As per CEC)]

621.59Ha (As per MMDR)

Fully Mechanized 'A' Category (Forest Area)

Non-Captive

Registration No: IBM/4369/2011

Mine Code: KAR03103

09/06/2015

Lease Period (w.e.f. 26.12.2005)

50 Years as per MMDR (Amendment) Act-2015 upto 25.12.2035

20 Years as per ML Deed Executed upto 25.12.2025

VOLUME-1

Text & Annexures

PREPARED BY

KARNATAKA STATE MINERALS CORPORATION LIMITED

KOP/ONG/4369/2011

Dy. General Manager (P)
Karnataka State Minerals Corporation Limited

Category wise Updated Reserves

Table-15				
Classification	Code	Reserves As on 01.11.2014 (Ts.)	Depletion of Reserves as on 29.02.2016	Up dated Reserves As on 01.03.2016 (Ts.)
1	2	3	4	
Total Mineral Resources (A+B)	---	14391290		8253630
A) Mineral Reserve				
1.Proved Mineral reserves	111	8288325	994640	8253630
2.Probable Mineral Reserve	121&122	2010980		
Total (A)		10299305		8253630
B. Remaining Resources	-			
1..Feasibility Mineral Resource	211*			
2.Prefessibility Mineral resource	211&222			
3.Measured Mineral resource	331			
4.Indicated Mineral resource	332			
5.Inferred Mineral resource	333	4091985	0.00	0.00
6.Reconnaissance Mineral resource	334			
Total (B)		4091985	0.00	0.00

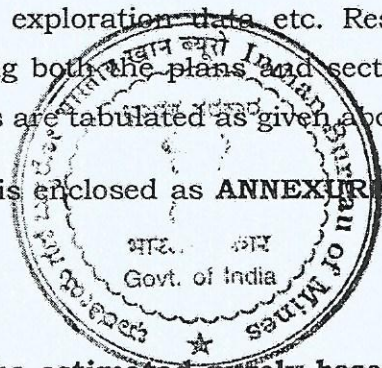
*The Mineralized Zone is located in the centre of the lease and entire mineral could be mined. Therefore the mineral under (211) does not arise in this lease.

A Feasibility report is enclosed as **Annexure-13**

k. Furnish detailed calculation of reserves /resources section wise (When the mine is fully mechanized and deposit is of complex nature with variation of size , shape of mineralized zones, grade due to intrusion within ore zone etc, an attempt may be made to estimate reserves /resources by slice plan method). In case of deposits where underground mining is proposed, reserve/resources may be estimated by level plan method, as applicable, as per the proposed mining parameters.

Based on the confidence level of exploration, the reserve/ resources were re-estimated considering the past mining data, exploration data etc. Reserve estimation is carried out separately considering both the plans and sections. And the variance is analyzed and the deviations are tabulated as given above.

The detailed calculation of Mineable Reserves is enclosed as ANNEXURE -14 respectively.



1. Mineral Reserves/Resources

Mineral Resources (Mineral resources may be estimated purely based on level of exploration, with reference to the threshold value of minerals declared by IBM)

Table-16		
Level of Exploration	Resources in million tons	Grade
G1- Detailed Exploration	8.253	+45% Fe
G2- General Exploration	-	+45% Fe
G3-Prospecting	-	+45% Fe
G4- Reconnaissance	-	

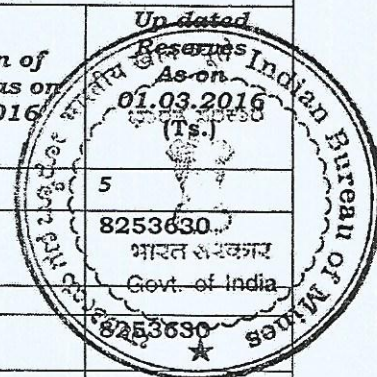
Resources and Reserves within the lease may be arrived after applying results feasibility/pre-feasibility study and economic evaluation of deposit based on various factors such as:

- a) Mining method, Recovery factor, mining losses, processing loss etc.
- b) Cut off grade , ultimate pit depth proposed
- c) Mineral /ore blocked dues to benches , barriers, pillars , road, railway, river, nallah , reservoir, electric line and other statutory barriers etc. under forest, sanctuaries etc, where necessary permissions are not available

The entire geological reserves are considered as mineable reserves, because the Mineralized Zone is located in the centre of the lease and entire mineral could be mined. The actual mineable reserves available for mining as on 01.12.2015 are as follows:

d) Updated mineable reserves

Table-17				
Classification	Code	Reserves As on 01.11.2014 (Ts.)	Depletion of Reserves as on 29-02-2016	Updated Reserves As on 01.03.2016 (Ts.)
1	2	3	4	5
Total Mineral Resources (A+B)	---	14391290		8253630
A) Mineral Reserve				
1.Proved Mineral reserves	111	8288325	1994640	8253630
2.Probable Mineral Reserve	121&122	2010980		
Total (A)		10299305		8253630
B. Remaining Resources				
1..Feasibility Mineral Resource	211*			
2.Prefessibility Mineral resource	211&222			
3.Measured Mineral resource	331			
4.Indicated Mineral resource	332			
5.Inferred Mineral resource	333	4091985	0.00	0.00
6.Reconnaissance Mineral resource	334			
Total (B)		4091985	0.00	0.00



*The Mineralized Zone is located in the centre of the lease and entire mineral could be mined. Therefore the mineral under (211) does not arise in this lease.

2.0 MINING

A. OPEN CAST MINING:

a) Briefly describe the existing as well as proposed method for excavation with all design parameters indicating on plans/sections.

The mine is being operated by open cast mining method and it is proposed to continue the same. Mining is carried out by deploying heavy earth moving machineries like DTH Drills, Hydraulic Excavators, Wheel Loaders, 20 T